

REMARKS/ARGUMENTS

The Section 112 Rejections and Claim Objections

The examiner's thorough reading of the application is appreciated.

Claims 9, 19 and 20 rejected under 35 USC 112 have been canceled.

The Double Patenting Rejection

The double patent rejection springs from the co-pending Application No 10/559,593, assigned to the assignee of this application.

The Application 10/559,593 is under prior art rejection and will be abandoned by non-response to the rejection.

The Section 103 Rejection

Claims 1 -20 are rejected under 35 USC 103(a) as being unpatentable over Banks et al (5,289,615) in view of Freudenstein (4,865,577).

Independent Claim 1 has been amended and a new independent Claim 21 is submitted by this amendment to more clearly and distinctly point out the Applicants' invention.

Applicants, as discussed at page 1, line 16 of the Background of the Invention, have recognized a problem with the prior art door hinge such as Banks 5,289,615. In Banks, the door swings out from the door opening in a way that the door stays parallel with the vehicle, and this is believed to be desirable as it keeps the door close in to the vehicle as the door swings open. However, as discussed by the Applicants, there is a problem with the parallel motion provided by Banks. The opening of the door allows the wind to catch the door and pry it open. Applicants also discuss the problem of the closing of the door causing a temporary pressure buildup in the vehicle so that the door does not want to close, thereby hindering the door latch mechanism from becoming latched.

Applicants have addressed these problems by inventing a new door hinge in which upon the opening of the door the rear of the door swings out faster than the front so that the door gets angled in a way that an inadvertent opening of the door while the vehicle is traveling will be resisted by the wind pushing the angled door back toward the closed position. And as the

opening movement continues, the Applicants' invention will then allow the front of the door to swing out faster than the rear of the door so that when the full open position is reached the door will be back in the desired parallel condition. Upon closing of the door, the front will swing in faster than the back, so that the front hits its seal first and the temporary pressure buildup can escape through the slower closing rear of the door.

Thus, Applicants have achieved a new, novel and nonobvious improvement and invention over the Banks prior art.

The examiner posits that the Applicants' invention is obvious over Banks in view of Freudenstein. Freudenstein relates to a non-circular sprocket and chain drive for a bicycle, and more particularly teaches the use of a computer to configure the shapes of the sprockets in such way that the chain will be kept taut and slack is prevented.

It is unlikely that an inventor in the vehicle door arts would look to the bicycle art for knowledge. In that unlikely event, at best, Freudenstein might be helpful in optimizing the design of sprocket drives once an inventor has invented a mechanism that uses sprockets and a chain. However, Applicants do not employ the teachings of Freudenstein. Although Freudenstein has noncircular sprockets and elliptical sprockets, there is no teaching or suggestion of controlling a door to achieve a closed position that is parallel and un-angled with respect to the vehicle door opening, an intermediate position that is angled with respect to the vehicle door opening, and a fully open position in which the door is parallel with the vehicle door opening.

The only way that Banks and Freudenstein can be combined is with the hindsight of knowing the Applicants' problem and solution. Indeed, the rejection merely states "It would have been obvious", without stating any basis for the manner in which it would be obvious. Even then, if you try to put some of the sprocket shapes of Freudenstein into Banks, to replace the circular sprockets of Banks, there is no reason to think the door movement would perform in the manner claimed by Applicants to overcome the shortcomings of Banks.

Conclusion

In view of the forgoing, it must be concluded that the rejections under 35 USC 103(a) cannot be sustained.

Accordingly, the Applicants' Claims 1-8, 10 -18, and 21 are allowable over the art of record, and allowance is earnestly solicited.

If for some reason a fee needs to be paid, please charge Deposit Account No. 07-0960 for the fee that may be due.

Respectfully submitted,

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